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REMARKS

Reconsideration of the application and consideration of the following remarks is respectfully requested. Claims 1 to 30 are currently pending, and no claims have been amended.

The Office Action mailed November 6, 2002 addressed Claims 1 to 30. Claims 1 to 30 were rejected.

Claims 1 to 6 and 8 to 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (US 5,820,489) in view of Cavallaro (US 5,688,191). The Examiner stated that Sullivan discloses a golf ball having a core with a PGA compression of 45 to 85 (Riehle 115 to 75), a diameter of 1.54 to 1.545 inches, a cover layer containing a high acid ionomer with a Shore D hardness about 65 or greater and a thickness of 0.08 to 0.13 inches. The Examiner further stated that Sullivan does not disclose a mantle layer but one of ordinary skill in the art recognizes that a golf ball can be fabricated with a plurality of layers including a mantle layer which impacts playing characteristics. The Examiner further stated that Cavallaro teaches that it is desirable to include a mantle layer which is believed to have an effect on the feel of the golf ball, therefore it would have been obvious in view of Cavallaro to one having ordinary skill in the art at the time of the invention to incorporate a mantle layer into Sullivan's invention in for a softer "feel" of the golf ball. The Examiner continued that Cavallaro discloses a mantle layer of thermoset materials with a mantle thickness of 0.025 to 0.125 inches, and a styrene-butadiene material and thermoplastic material of polybutylene terephthalate. The Examiner further stated that with respect to claims 3 and 4, Official Notice is taken that it is known in the art that multilayer golf balls with multiple core layers and multiple intermediate or mantle layers overcome the traditional hard feel two-piece balls, and such mantle or intermediate layers have thermoset materials and nylon-based materials of the claimed invention, therefore it would have been obvious to use such materials in the mantle layer or intermediate layers of Sullivan and Cavallaro.

Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. Sullivan discloses a two piece golf ball comprising a core and a

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cover, and the cover is preferably a thick cover (see column 4, lines 26 to 28, which states that the "cover is preferably sized to be larger than conventional diameters"). As stated by the Examiner, Sullivan does not disclose a mantle layer. Cavallaro discloses a multilayer golf ball having a core, a mantle and a cover. Applicants respectfully disagree with the Examiner's statement that "Cavallaro teaches that it is desirable to include a mantle layer which believes to have an effect on the 'feel' of the golf ball" and submit that the Examiner has mischaracterized the teachings of Cavallaro. At the cited passage, Cavallaro teaches that the physical properities of the layers impact the playing characteristics, and the flexural modulus and/or tensile moduli of the mantle layer have an effect on the "feel" of the golf ball (column 8, lines 6 to 12). Cavallaro continues by stating that it is preferred that the mantle has a particular flexural modulus and tensile modulus in order to make it feel soft. Applicants respectfully submit that Cavallaro teaches that a mantle with specific properties, along with the other components of the golf ball which also have specific properties, will impact the feel, not that a mantle generally, as asserted by the Examiner, will be desirable.

Cavallaro additionally teaches that the core is about 1.25 to about 1.51 inches, less than the core diameter of Sullivan, which the Examiner stated has a diameter of 1.54 to 1.545 inches. Applicants respectfully submit that there is no teaching or suggestion in Cavallaro or Sullivan to motivate one skilled in the art to add a mantle to the golf ball of Sullivan. One skilled in the art would not be motivated to add a mantle layer to the golf ball of Sullivan because Sullivan specifically teaches a two piece golf ball having a large core and a larger, thicker cover. If another layer, such as a mantle layer, was added to Sullivan, this would possibly make the golf ball too large because both the core and cover layer of Sullivan are larger than those of Cavallaro. Applicants respectfully submit that Sullivan teaches away from adding another layer by providing a soft core for the soft feel and the thicker cover, and a resulting golf ball having reduced spin.

Even if there was some teaching or suggestion to combine Sullivan and Cavallaro, which Applicants submit there is not, Cavallaro does not disclose a mantle comprising a polymeric material having a reinforcing material dispersed throughout the polymeric material. Therefore, the addition of Cavallaro does not cure the fundamental deficiency of

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Sullivan, that is, Sullivan does not disclose a mantle, or a mantle comprising a polymeric material having a reinforcing material dispersed throughout the polymeric material. The addition of Cavallaro would only provide a mantle layer. Furthermore, neither Sullivan nor Cavallaro, either alone or in combination, disclose a core having a core component and a mantle layer wherein the core has a Riehle compression of at least 75. The core of Sullivan, which does not comprise a core component and a mantle layer, has a Riehle compression of about 75 to 115, but Sullivan does not disclose a core which includes a core component and a mantle, wherein the core comprising the core component and mantle have a Riehle compression at least about 75. Even if a mantle layer was added to Sullivan, the core and mantle layer combination would not necessarily have a Riehle compression of at least 75. ✓

Applicants respectfully traverse the Examiner's assertion that it is known in the art that golf balls with multiple core layers and multiple intermediate or mantle layers overcome the traditional hard feel two piece balls and request proof. Applicants respectfully submit that the Examiner has made a very broad and generalized assertion, and not all golf balls having multiple layers are soft or softer than two piece balls, and not all two piece balls feel hard. For example, Applicants respectfully submit that a multilayer ball having a hard core, a hard mantle layer(s) and a hard cover layer(s) will feel hard, even though it has a mantle layer. Address ✓

Claims 2 to 6 and 8 to 18 depend, or ultimately depend, from claim 1, which Applicants submit is not obvious over Sullivan in view of Cavallaro for the reasons just discussed, therefore, claims 2 to 6 and 8 to 18 are also not obvious over Sullivan in view of Cavallaro.

For at least these reasons, Applicants respectfully submit that claims 1 to 6 and 8 to 18 are not obvious under 35 U.S.C. § 103(a) over Sullivan in view of Cavallaro. Applicants therefore respectfully request that the rejection of claims 1 to 6 and 8 to 18 under 35 U.S.C. § 103(a) as obvious over Sullivan in view of Cavallaro be reconsidered and withdrawn.

Claims 7 and 19 to 30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (US 5,820,489) in view of Cavallaro (US 5,688,191) as applied in claim 1, and further in view of Shama (US 4,848,770) and Schenk (4,085,937) and Boehm

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et al. (US 5,683,312). The Examiner stated that with respect to claims 7, 19 to 22, 28 and 29, Sullivan and Cavallaro disclose the claimed invention except a vitreous or glassy mantle layer but Sullivan does disclose the use of fillers in the core formulation. The Examiner further stated that Shama teaches a mantle layer with a filler to control the weight of the finished golf ball, provide compression, and cut resistance to the golf ball, and it is also known in the art that filler provides reinforcement of the golf ball. The Examiner further stated that Schenk teaches the use of glass microspheres in the formulation to provide cut resistance and control the weight of the golf ball, therefore it would have been obvious in view of Shama and Schenk to one having ordinary skill in the art to incorporate the filler of Shama with specific filler types of silica and glass microspheres of Schenk to control the weight, improve compression, and cut resistance as taught by Shama and Schenk. The Examiner further stated that claims 23 to 27 recite limitations similar to claims 1, 10 and 16 to 18, therefore claims 23 to 27 are rejected for the same reasons as applied to claims 1, 10 and 16 to 18 above. The Examiner further stated that with respect to claim 28, the prior art discloses the claimed invention except the use of metal filler in the mantle, but Boehm teaches the use of aluminum, therefore it would have been obvious in view of Shama, Schenk and Boehm to incorporate a metal filler as taught by Boehm in Sullivan and Cavallaro to control weight and provide reinforcement for the golf ball. The Examiner further stated that with respect to claim 29, each metal has its own specific gravity, and the selection of metal and/or alloy and its amount in the formulation must result in a finished golf ball that complies with USGA weight limits. The Examiner concluded that claim 30 recites limitations similar to claim 14, therefore claim 30 is rejected for the same reason as claim 14.

Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. As discussed above, Sullivan discloses a two piece golf ball comprising a core and a cover, and the cover is preferably a thick cover. As stated by the Examiner, Sullivan does not disclose a mantle layer. Cavallaro discloses a multilayer golf ball having a core, a mantle and a cover, but Cavallaro does not disclose a mantle layer comprising a polymeric material with a reinforcing material dispersed in the polymeric material.

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As previously discussed, there is no motivation, suggestion or teaching to combine Sullivan and Cavallaro and to add the mantle layer of Cavallaro to the golf ball of Sullivan. Even if the mantle of Cavallaro was added to the golf ball of Sullivan, Applicants' golf ball having a mantle layer comprising a polymeric material with a reinforcing material dispersed in the polymeric material would not be disclosed, wherein the combination of the core and mantle have a Riehle compression of at least 75. Since there is no motivation, suggestion or teaching to combine Cavallaro with Sullivan, the addition of additional references, such as Shama, Schenk and/or Boehm does not remedy this defect. Sullivan, as previously stated, is a two piece ball with specific core and cover features. There is no motivation at all to add a mantle to the golf ball of Sullivan to produce a golf ball having a core including a core component and a vitreous mantle (claim 19) or a core having an interior core component and a mantle layer including at least one metal (claim 28).

Regarding claim 29, Applicants respectfully request an explanation of the Examiner's statement that "each metal has its own specific gravity, and the selection of metal and/or alloy and its amount in the formulation must result in a finished golf ball that complies with USGA weight limits." Applicants do not understand why this is relevant or how this makes it obvious to select from the group of metals in claim 29.

Applicants respectfully submit that the Examiner has mischaracterized the teachings of Sullivan. Sullivan does disclose the use of fillers in a core, but Sullivan does not disclose the use of fillers of any type in a mantle since Sullivan does not even disclose a mantle layer at all.

Claim 7 depends from claim 1, which, as discussed above, Applicants respectfully submit is not obvious over Sullivan in view of Cavallaro, therefore claim 7 is also not obvious over Sullivan in view of Cavallaro. Claims 20 to 27 and 29 to 30 depend, or ultimately depend, from claims 19 and 28 respectively, which Applicants submit are not obvious over Sullivan in view of Cavallaro, further in view of Shama, Schenk and Boehm, for the reasons just discussed, therefore, claims 20 to 27 and 29 to 30 are also not obvious over Sullivan in view of Cavallaro, further in view of Shama, Schenk and Boehm.

For at least these reasons, Applicants respectfully submit that claims 7 and 19 to 30 are not obvious under 35 U.S.C. § 103(a) over Sullivan in view of Cavallaro, further in view

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of Shama, Schenk and Boehm. Applicants therefore respectfully request that the rejection of claims 7 and 19 to 30 under 35 U.S.C. § 103(a) as obvious over Sullivan in view of Cavallaro, further in view of Shama, Schenk and Boehm, be reconsidered and withdrawn.

The Examiner is invited to telephone Applicants' attorney if it is deemed that a telephone conversation will hasten prosecution of the application.

**CONCLUSION**

Applicants respectfully request reconsideration and allowance of each of the presently rejected claims, claims 1 to 30. Applicants respectfully request allowance of claims 1 to 30, the claims currently pending.

Respectfully submitted,

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